

A REVISION OF THE GENUS *DUSHINCKANUS* WITH
DESCRIPTIONS OF TWO NEW SPECIES
(HEMIPTERA: LYGAEIDAE)

B. J. HARRINGTON

Department of Entomology, University of Wisconsin,
Madison, Wisconsin 53706

Abstract.—A diagnosis for the Neotropical genus *Dushinckanus* and a key for species identification are presented. *Myodocha inermiba* Distant is transferred to *Dushinckanus*, new combination, and two new species, *D. ashlocki* from Brazil, and *D. camelopardus* from Ecuador are described. Line drawings of the head and pronotum of *D. camelopardus* and *D. ashlocki* and a full dorsal view illustration of a male of *D. crassicornis* Brailovsky, 1981 are provided.

The Neotropical lygaeid genus *Dushinckanus* Brailovsky belongs to the tribe Myodochini in the subfamily Rhyparochrominae. This genus was not included in Harrington's (1980) revision and cladistic analysis of the tribe. However, utilizing that key to genera, it would run to couplet number 3 which separates *Pephysena* and *Myodocha*. While *Dushinckanus* does have slender forefemora in common with *Myodocha*, its cladistic affinities lie instead in the lineage with *Distingphyses* Scudder, *Pephysena* Distant, *Tenuicoris* Slater and Harrington, and *Neopamera* Harrington (internode 36-44 in Harrington's (1980) cladogram) based on the synapomorphy of a groove on the lateral surface of the preocular portion of the head beneath a carinate or ridge-like jugum. It shares oval eyes and a head with the postocular portion constricted to form a distinct neck with *Distingphyses*, *Pephysena*, and *Tenuicoris*; densely distributed anastomosing head punctation with *Distingphyses* and *Pephysena*; and a characteristic stalk-like neck with *Pephysena*. *Dushinckanus*' slender, almost mutic forefemora readily distinguish it from its sister group *Pephysena*.

When Brailovsky (1979) described *Dushinckanus*, he placed it in the framework of Harrington's (1980) tribal revision and discussed ways to distinguish it from *Myodocha*, *Pephysena*, *Tenuicoris* and *Heraeus* Stål, stressing what he believed to be two diagnostic features: 1) slender forefemora with spination reduced to a few minor spines, and 2) "protuberant" or tuberculate ocelli. While this latter feature is very pronounced in the type species *D. ocellatus* Brailovsky (1979), it varies within the genus. In some members, including *Dushinckanus crassicornis* Brailovsky (1981), the second species recognized to date, the ocelli may be virtually flush with the head's surface and show no more tuberculation than can be observed in many other Myodochini, including members of the genera *Xenydrium* Poppius and Bergroth, *Tenuicoris*, and *Heraeus*.

Thus, the first feature, slender forefemora with few spines, remains the best for recognition of the genus *Dushinckanus*. Among the necked genera of Myodochini, only members of *Tenuicoris*, *Myodocha* Latreille and *Dushinckanus*, all having Type IV male genitalia (Harrington, 1980), have slender forefemora with the size as well as the number of spines reduced. In both *Tenuicoris* and *Myodocha* the spines are

double-ranked (those on the posterior aspect of the ventral surface in *Tenuicoris* being very small, restricted to a few close-set spines on the extreme distal end, and distinguished only with difficulty), while all known species of *Dushinckanus* have the spines single-ranked or restricted to just the anterior aspect of the ventral surface. In *Dushinckanus* the spines are also often so small, bump-like and little raised from the femoral surface that they may be overlooked entirely. This was clearly the case when Distant (1882) described *Myodocha inermiba*, noting that, "The unarmed femora render this species very distinct."

In the current paper I place *M. inermiba* in *Dushinckanus*, new combination and describe two new species. A single specimen lacking locality data (the specimen is in good condition but bears a label reading only "28-III") was examined from the American Museum of Natural History. It will probably prove to represent another distinct species. Material of *Dushinckanus* is scarce in collections, all species being known from a few specimens. However, the genus is widely distributed, ranging from Mexico south at least to Rio de Janeiro, Brazil. I collected a single specimen in Panama and from its habitat suspect that the genus may be part of a forest litter fauna that is not generally collected.

All measurements in the following descriptions are in mm and the Villalobos color chart (Palmer, 1962) has been used as a standard. The following acronyms for collections have been used in the text: American Museum of Natural History, New York (AMNH); British Museum (Natural History), London (BMNH); National Museum of Natural History, Rio de Janeiro (BNMNH); Carnegie Museum of Natural History, Pittsburgh (CMNH); National Museum of Natural History, Washington, D.C. (NMNH); private collection of Peter D. Ashlock (PDA); private collection of James A. Slater (JAS); and private collection of the author (BJH).

KEY TO SPECIES OF *DUSHINCKANUS*

- 1. Immediate postocular portion of head rounded or dome-like, then abruptly constricted into a short neck (Fig. 1b); postocular distance usually less than or subequal to interocular distance; length of antennal segment III less than width of head, and length of antennal segment II less than or equal to width of head; transverse pronotal impression strongly incised, with punctures in depth of impression 2
- Postocular portion of head sloping gradually into stalk-like neck (Fig. 1a); neck long and slender with postocular distance greater than interocular distance; lengths of antennal segments II and III each exceeding width of head; transverse pronotal impression shallow, complete, impunctate 4
- 2. Postocular portion of head, pronotum, scutellum, and hemelytra hirsute, with numerous semi-erect long hairs, those on hemelytra emerging from punctures and 3× or more as long as puncture's width; antennal segments III and IV appearing somewhat incrassate with dense hairs or bristles; punctures of transverse pronotal impression forming a row in depth of impression; ocelli only slightly tuberculate *crassicornis*
- Not hirsute as above, sometimes with long hairs present on postocular portion of head but rest of dorsal body surface hairless or at most with very short non-erect hairs detectable within the punctures and subequal to the puncture's width; antennal segments III and IV not appearing incrassate; punctures of transverse pronotal impression not in a regular row; ocelli markedly tuberculate 3
- 3. Veins on posterior one-half of hemelytral membrane (beyond prominent dark macula on anterior one-half) dark, contrasting with membranal background; antennal segment

- IV completely dark; antennal segment III longer than segment II or the segments subequal *ocellatus*
- Veins on posterior one-half of hemelytral membrane (beyond prominent dark macula on anterior one-half) pale, lighter than membrane background; antennal segment IV with a broad, striking, light red annulus that contrasts with dark areas proximally and distally; antennal segment II longer than segment III *ashlocki*
4. Posterior pronotal lobe with a distinct, narrow, continuous, yellow, transverse band on its anterior one-half; antennal segment II orange, lighter than other three segments which are each uniformly dark; length of antennal segment III less than $3 \times$ interocular distance; total length of antennal segments less than $10 \times$ interocular distance *inermibus*
- Yellow portion of posterior pronotal lobe not a continuous band, less apparent and present as mottling or as four diffuse patches that may run onto posterior one-half of posterior pronotal lobe; antennal coloration not as above, all four segments fairly uniform in color; length of antennal segment III greater than $3 \times$ interocular distance; total length of antennal segments greater than $10 \times$ interocular distance *camelopardus*

Dushinckanus crassicornis Brailovsky

Fig. 2

Dushinckanus crassicornis Brailovsky, 1981:217–219.

Discussion. Brailovsky (1981) gave a detailed description of this species which is best recognized by the scattered long hairs on the dorsal surface, including the head, pronotum, scutellum, clavus and corium. The incrassate antennae, which prompted the species epithet and are noted in the original description, are an unreliable feature exhibiting variability as discussed below.

I have examined the holotype from the American Museum of Natural History and six additional specimens. While the color pattern is consistent among them, the general or background coloration varies, ranging from predominantly tawny in a pale specimen from the Panama Canal Zone to a dusky brown in darker specimens including the holotype.

More striking than the color variation is the morphological variation in head shape and the shape of the third and fourth antennal segments. In all specimens examined the third antennal segment has numerous dark, bristle-like hairs that give an enlarged, bottle brush appearance to the segment. In the holotype, which is a female, the third and fourth antennal segments are definitely incrassate, as well as evidencing the dark bristle-like hairs on the third segment. The antennae were similarly incrassate in one of the two other female specimens examined; the third female, unfortunately, had the third and fourth antennal segments missing. The remaining four specimens examined were males in which the third and fourth segments are not swollen, the third being of the same girth as the second, despite a somewhat enlarged appearance contributed by the dark, bristle-like hairs. Thus, sexual dimorphism is suggested for the antennal variation in this species, and Figure 2 depicts a male specimen with slender antennae. However, sexual dimorphism does not explain the subtle variation in head shape observed. The vertex of the head was evenly rounded behind the ocelli in the holotype and more pointed in the other six specimens, females as well as males.

Material examined. **Guatemala:** 1♀, Peten (at light at camp), 17-V-1956, T. H. Hubbell (holotype *D. crassicornis*, AMNH). **Mexico:** 1♀, Veracruz, Lake Catemaco,

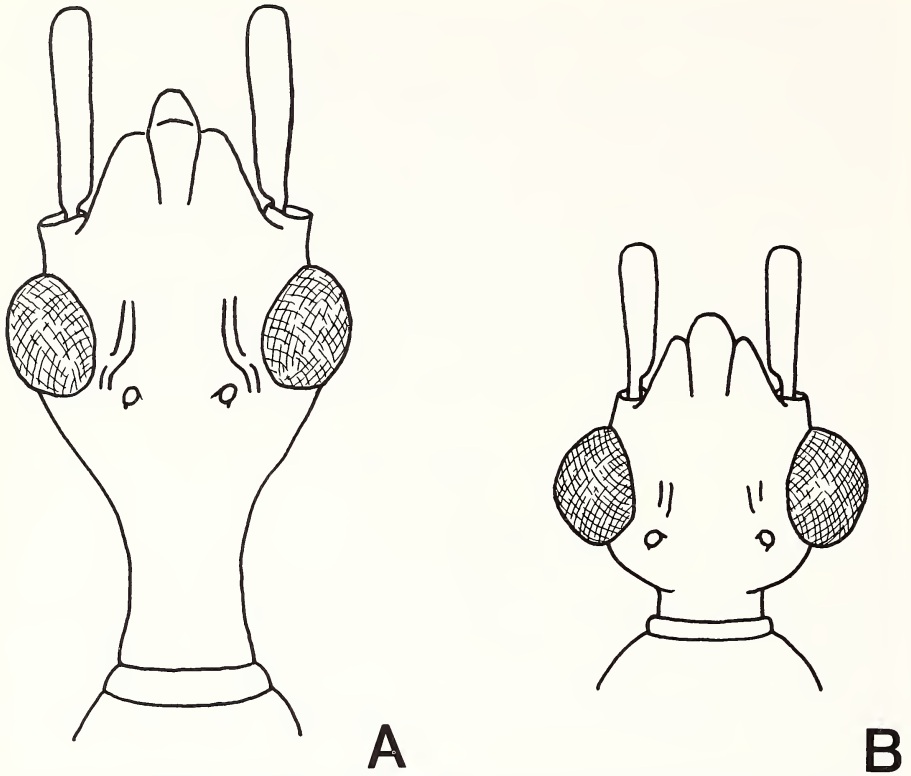


Fig. 1. Head/neck shapes: A. *Dushinckanus camelopardus*. B. *Dushinckanus ashlocki*.

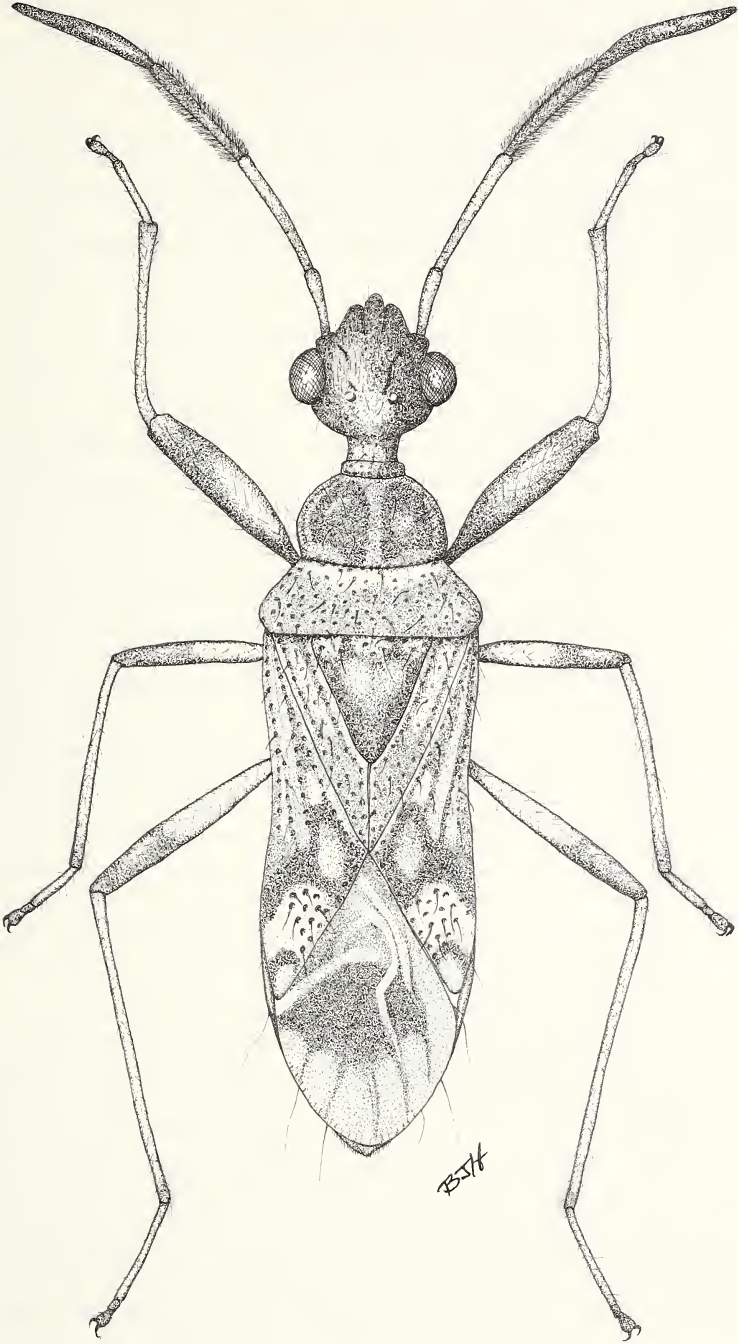
'Coyame,' 7, 9-VII-1963, R. E. Woodruff (blacklight trap) (JAS). **Panama Canal Zone:** 1♀, Barro Colorado, 19-VI-1924, N. Banks (AMNH); 1♂, Barro Colorado I, 21-IX-1976, R. B. & L. S. Kimsey (PDA); 1♂, Barro Colorado Is., 8-VII-1967, C. W. & L. O'Brien (JAS). **Panama:** 1♂, Fort Amador, II-1964, Ch. Keenan (NMNH); 1♂, La Mesa above El Valle, 13-I-1974, Harrington & Slater (BJH).

Dushinckanus ocellatus Brailovsky

Dushinckanus ocellatus Brailovsky, 1979:549-551.

Discussion. Brailovsky (1979) described this species as the type of a then monotypic genus. It is best recognized, as the name suggests, by its tuberculate ocelli. *D. ocellatus*, in fact, presents the extreme of this condition which varies considerably among species in the genus, and in some the ocelli are little, if at all, tuberculate.

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Fig. 2. *Dushinckanus crassicornis*. Dorsal view of a male specimen exhibiting sexually dimorphic slender antennae.



Material examined. **Brazil:** 1♂, Mato Grosso: Lat. 12°31' & Long. 55°37', Sinop, X-1974, M. Alvarenga (holotype *D. ocellatus*) (NMNH); 1♀, Rondonia: Vilhena, XI-1973, M. Alvarenga (allotype *D. ocellatus*) (AMNH); 1♀, Rio de Janeiro, Acc. No. 2966 (CMNH).

Variation. The female specimen from Rio de Janeiro is of an overall lighter color, especially on the head and pronotum, and has a shorter neck and somewhat less rounded anterior pronotal lobe than the holotype and allotype. However, the general color pattern is consistent with that of the type material.

A male paratype of *D. ocellatus* was also examined and is recognized in this paper as a new species.

***Dushinckanus ashlocki*, new species**

Fig. 1B

Dushinckanus ocellatus Brailovsky, 1979:551 (♂ paratype).

Description. Head, anterior pronotal lobe, basal one-half of scutellum and most of ventral and lateral aspects of all thoracic segments chestnut. Posterior pronotal lobe, medial portion of anterior pronotal collar, metepimeron, socket around pro- and mesocoxae (formed by both episternum and epimeron), and labial segment I buffy brown. Remaining labial segments, tarsi and tibia of all legs, and antennal segments I and II sordid buffy yellow. Antennal segment III buffy brown proximally darkening gradually to fuscous on distal two-thirds. Antennal segment IV narrowly fuscous proximally and more broadly so at apex, a broad band covering most of segment bright rufous tinged with brownish red. A diffuse band between tawny and buffy yellow extending across posterior pronotal lobe behind transverse impression, widest in two broad points on either side of midline. Background color of clavus and corium between buffy brown and buffy yellow. An indistinctly margined broad transverse buffy brown fascia on corium extending from lateral margin to medial corial angle. Five small, pale, cream colored maculae on each corium distributed with a pair directly before and a second pair directly posterior to dark band or fascia and the fifth behind posterior pair fitting within apical corial angle. Hemelytral membrane with a smoke gray background marked with a large macula between fuscous and blackish brown on anterior one-half; two curving veins toward anteromedial margin and finger-like veins posterior to broad dark macula a pale sordid cream. Abdomen laterally and ventrally and broad preapical bands on all femora tawny.

Antennae, legs and labium smooth and impunctate. Antennae with both fine recumbent hairs and some slightly longer and erect or semi-erect; density of recumbent hairs increasing distad, with segment IV being most pilose. Legs and labial segments with only sparse semi-erect hairs. Tibiae of all legs also bearing scattered bristles along length of inner surface. Head shining, with numerous small anastomosing punctures giving a rugose appearance and moderately dense recumbent and semi-erect hairs directed anteriorly over much of surface; rounded postocular region with a few very long (ca. 0.20) curving erect hairs. Pronotum, scutellum, clavus, corium and most of ventral and lateral aspects of all thoracic segments pruinose, except small subshining lobe on metathoracic scent gland auricle and a pair of large shining patches on either side of mesosternal midline. Anterior pronotal lobe, save collar,

impunctate. Anterior pronotal collar, posterior pronotal lobe, clavus, corium and scutellum except for a broad T-shaped carina on posterior two thirds punctate. Punctures on basal one third of scutellum smaller than those on either side of stem of T. Claval punctures in three regular rows plus a partial fourth, paralleled by two rows of punctures on adjacent portion of corium. Punctures laterally on corium in a single submarginal row from anterior margin to level of scutellar apex, thereafter scattered in a broad patch. Punctures laterally on thorax most dense and apparent on epimeral regions of all three segments and episternum only in the portion forming a socket for the pro- and mesocoxae. A large rugose or shagreened evaporative area surrounding the metathoracic scent gland auricle, reaching midway on metepisternum toward hemelytral edge, also covering coxal socket portion of mesepimeron and running from there dorsad to hemelytral edge as a thin line along suture between meso- and metapleura. Abdomen ventrally and laterally subshining, with a light scattering microtexture and numerous fine recumbent hairs. Hairs on thorax, clavus and corium also recumbent but scattered, emerging primarily from punctures and approximately as long as puncture's width. Hemelytral membrane dull, subshining, with a very fine granular appearance.

Head gently declivent anteriorly from vertex; broadly rounded postocularly then abruptly constricted to form a very short but still parallel-sided and stalk-like neck. Jugal carinate. Tylus nearly attaining distal end of antennal segment I. Eyes rounded. Ocelli prominent and moderately tuberculate, situated just anterior to hind margin of eye. Length of head 1.10; postocular length 0.26; width across eyes 1.06; interocular distance 0.50. Anterior pronotal lobe globose; lateral margins rounded and strongly convex; anterior margin with a distinct band-like collar. Transverse pronotal impression complete and well demarcated. Posterior pronotal margin straight across base of scutellum. Humeral angles truncate. Length anterior pronotal lobe 0.60; width 0.92; width transverse impression 0.88; length posterior pronotal lobe 0.58; width across humeral angles 1.50. Length scutellum 0.82; width 0.68. Hemelytra not quite attaining posterior end of abdomen; rounded rim of pygophore just barely visible beyond apex of membrane. Lateral corial margins sinuate at level of scutellar apex. Length corium 2.54; midline distance apex corium to apex membrane 0.84; length claval commissure 0.54; midline distance apex clavus to apex corium 1.08. Labium attaining mesocoxae. Length labial segments I 0.74, II 0.80, III 0.62 and IV 0.40. Bucculae short, projecting anteriorly around base of labium; buccular juncture broadly V-shaped and occurring close to base of labium. Antennae slender with segment IV fusiform and curving slightly. Length antennal segments I 0.50, II 0.96, III 0.86 and IV 1.10 (the right antenna oligomeric with only three segments). Total length 5.68.

Holotype. **Brazil**: 1♂, Rio de Janeiro, Silva Jardim, VIII-1974, F. M. Oliveira (AMNH). This new species is described from a single specimen, which was previously included as a paratype of *D. ocellatus* Brailovsky, but is clearly not conspecific with the holotype of *D. ocellatus*.

Etymology. I name this species for my colleague Dr. Peter D. Ashlock in appreciation for the many interesting specimens and moral support he has lent me over the years and for useful interactions and systematic advice which he has given very freely.

Dushinckanus inermibus (Distant), New Combination

Myodocha inermiba Distant, 1882:204.

Discussion. This striking species was described by Distant (1882) from a single specimen. Distant's description and dorsal view illustration allow identification of this species, which can also be recognized by characters included in the preceding key. The orange color of antennal segment II and the yellow band on the otherwise darker posterior pronotal lobe are quite distinctive. In general, this species has the same body form and surface texture indicated in the new species descriptions of this paper, being closest, as the key indicates to *D. camelopardus*.

Material examined. **Panama:** 1♀, Cerro Campana, 800 m R. de Pan, 8°40'N, 79°56'W, 27-VIII-1972, Engleman (PDA); 1♂, Bugaba, Champion (BMNH). **Costa Rica:** 1♀, Puntarenas Prov., Osa Peninsula, 2.5 mi SW Rincon, 08°42'N, 83°29'W, 1, 2-III-1969, leaf litter at night, K. Edwards (PDA).

Variation. The specimens examined are consistent with the original description, except that each has a small oval white macula in the center of the hemelytral membrane just behind the darkened anterior one-half, a feature possibly overlooked by Distant (1882). I have previously compared the Champion collected Bugaba, Panama specimen with the lectotype in the British Museum. This specimen is lighter and more orange in general coloration than the other two specimens examined in this study, but the basic color pattern does not vary among the three specimens.

Dushinckanus camelopardus*, new species*Fig. 1A**

Description. Head, anterior pronotal lobe, basal one-half of scutellum, and most of pleural and sternal surfaces of pro- and mesothorax blackish brown. Large macula on proximal one-half of hemelytral membrane and finger-like projections beyond it in distal portion of membrane between chestnut and blackish brown. Metapleura and metasterna, coxae and tibiae distally of all legs, forefemora, distal one-half of meso- and metafemora, apical one-half of scutellum, antennal segments I, III and IV as well as all but extreme distal portion of II, labium and majority of ventral surface of abdomen dark chestnut. Posterior pronotal lobe and clavus and corium along suture between them light chestnut. Four large elongate spots with imprecise borders distributed evenly across anterior one-half of posterior pronotal lobe and background color of clavus and corium tawny. A broad, irregular, transverse fascia preapically on corium, slender macula in narrow chestnut area of corium adjacent to clavus and curving vein demarking the proximomedial edge of dark membranal macula pale, sordid cream. Background color of membrane pale fuscous, contrasting with pale curving vein, dark distal veins and large dark macula. Distal end of antennal segment II, tarsi, and proximal one-half of meso- and metafemora pale, between buffy yellow and buffy brown. Lobe on rim of metathoracic scent gland auricle between brownish red and tawny.

Antennae, legs and labium smooth and impunctate. Antennae with numerous short, recumbent, distally directed hairs. Legs and labium with hairs slightly longer and less numerous. Tibiae of all three pairs of legs also bearing slender spine-like bristles. Head with numerous minute, anastomosing punctures giving a rugose or

roughened appearance and covered with many anteriorly directed recumbent hairs, except on prominent tylus which is largely devoid of hairs, impunctate and shining. Anterior pronotal lobe, save collar, impunctate. Collar of anterior pronotal lobe, posterior pronotal lobe, scutellum, clavus and corium with scattered punctures; scutellar punctures on apical one-half dense on either side of the stem of a broad impunctate Y-shaped carina. Dorsal body surface, other than that of head, dull with a gray pruinosity and with a few minute hairs restricted to punctures; pruinosity on anterior pronotal lobe very dense and forming a pattern with that on calli less dense so that calli appear as a pair of large dark patches separated by a median line of heavier pruinosity. Pleural and sternal portions of thorax largely pruinose, with few scattered punctures. Mesosternum with a pair of shining patches on either side of midline. Lobe of metathoracic scent gland auricle shining as well as contrasting in color. A rugose evaporative area around scent gland auricle covering metepisternum at least half way to hemelytral edge; this same texture present on mesepimeron and extending as a thin line along full length of meso-metapleural suture. Abdomen ventrally subshining, with numerous fine recumbent hairs and an irregular light-scattering texture.

Head gradually constricted postocularly to form a slender stalk-like neck (Fig. 1a). Vertex somewhat depressed before prominent, tuberculate, anterolaterally directed ocelli which lie just at level of hind margin of eyes. Juga carinate. Tylus prominent, somewhat elongate, and reaching to midlength of antennal segment I. Eyes protruding and suboval. Length of head 2.10; postocular length 0.88; width across eyes 1.22; interocular distance 0.48. Anterior pronotal lobe with rounded lateral margins directed gradually anteromesad toward a distinct anterior collar. Transverse pronotal impression complete but shallow and not strongly demarked. Posterior margin of posterior pronotal lobe straight across base of scutellum. Humeral angles rounded. Length anterior pronotal lobe 0.90; width 1.14; width transverse pronotal impression 1.12; length posterior pronotal lobe 0.70; width across humeral angles 1.80. Length scutellum 1.12; width 0.92. Hemelytra not quite attaining end of abdomen. Lateral corial margins sinuate at level of claval commissure. Length corium 3.40; midline distance apex corium to apex membrane 1.36; length claval commissure 0.72; midline distance apex clavus to apex corium 1.52. Lateral margins of last abdominal segment ending in a pair of small acute spines. Posterior ends of last connexival segment similarly spined on each side. Labium attaining mesocoxae. Length labial segments I 1.28, II 1.30, III 0.90 and IV 0.50. Bucculae short and rounded, directed anteriorly around base of labium; buccular juncture broadly V-shaped and occurring close to base of labium. Antennae slender with segment IV slightly curving. Length antennal segments I 0.90, II 1.62, III 1.52 and IV 1.50. Total length 8.52.

Holotype. Ecuador: 1♀, Coca, Mayo -65, L. F. Pena (BNMNH).

Etymology. Of the species known to date, *D. camelopardus* has the longest neck. I have no doubt that *Myodocha* and *Dushinckanus* are distinct genera and should remain recognized as such. However, to preclude any possibility of future homonymy with *Myodocha giraffa*, this new species has been given the species epithet of *camelopardus*, a synonym for the vertebrate giraffe.

A single female specimen of what is apparently a seventh species was examined from the American Museum of Natural History. Unfortunately, the specimen lacked locality data. Thus, since not even a country was indicated for locality (the label

reads only "28-III"), I have refrained from formally describing this species. It is apparently the sister species of *D. camelopardus* from which it differs by having the fourth antennal segment with a broad, pale annulus and the lateral margins of the anterior pronotal lobe more convex.

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